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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/784,960	02/15/2001	Ryan J. Berg	1136.005	5436

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EXAMINER

DAVIS, ZACHARY A

ART UNIT	PAPER NUMBER
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2137

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/784,960

Applicant(s)

BERG ET AL.

Examiner

Zachary A Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 15 February 2001 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file. All references have been considered with the exception of references of which copies were not received: specifically, copies of "NSA Windows Security Guidelines"; "Hacking Exposed"; and Chapter 2 of "Inside Windows NT" have not been received. Additionally, a copy of a document not listed on the information disclosure statement has been received, which is titled only as "Chapter Six: Security", pages 305-324; this document was not considered.

Specification

2. The disclosure is objected to because of the following informalities:

The specification appears to contain minor typographical errors. For example, on page 7, lines 11-12, it appears that "privilee-driven" is intended to read "privilege-driven". Appropriate correction is required. Applicant's

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cooperation is requested in correcting any errors of which Applicant may become aware in the specification.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 19-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 19-22 are directed solely to computer code *per se*, which is not tangibly embodied in a computer readable medium. This is not statutory subject matter.

5. To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. 101 above are further rejected as set forth below in anticipation of Applicant amending these claims to place them within the statutory classes of invention.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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7. Claims 2 and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, Claim 2 recites the limitation "maintaining the communications free from the user space" in lines 3-4 of the claim, and Claim 16 similarly recites the limitation "being free from the user space" in lines 2-3. The specification does not clearly define or describe these limitations.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 2, 16, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "maintaining the communications free from the user space" in lines 3-4. Claim 16 also recites the limitation "being free from the user space" in lines 2-3. These limitations are so broad as to render the scope of the claims indefinite, as it is unclear as to how exactly the communications are "free from the user space". For purposes of applying the prior art, it has been assumed that the limitation is intended to read similarly to Claims 3 and 17, in which communications travel between user and kernel spaces while encrypted.

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Claim 22 recites the limitation "said states" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-3, 9, and 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Kavsan, US Patent 6412069.

In reference to Claim 1, Kavsan discloses a method including disposing an authentication module in the kernel space for encrypting and decrypting communications (Figure 1, Cryptographic Service Module 10), disposing a transport module in the kernel space to transmit and receive communications (Figure 1, Kernel API 8), and selectively actuating the authentication module and transport module to convey communications to and from kernel-level components (column 3, lines 20-24).

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In reference to Claims 2 and 3, Kavsan further discloses that communications pass between user space and kernel components while encrypted (column 3, lines 24-27).

In reference to Claim 9, Kavsan further discloses that the transport module includes a communication server within the kernel space (column 3, lines 46-52).

Claims 18 and 19 are directed to computer readable code defining methods corresponding substantially to Claim 1, and are rejected by a similar rationale.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 4-8, 10-17, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kavsan in view of Nagar, "Windows NT File System Internals".

In reference to Claim 4, Kavsan discloses everything as applied to Claim 1 above. However, Kavsan does not explicitly disclose a filter driver to intercept the communications.

Nagar discloses that filter drivers may be used to intercept requests or communications targeting another kernel level driver (page 617, "What Is a Filter Driver?").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Kavsan by including a filter driver to intercept the communications, in order to provide added value beyond the core operating system environment (see Nagar, page 615, "Why Use Filter Drivers?").

In reference to Claim 5, Kavsan further discloses receiving communications, decrypting the communications, and permitting communications to be received by the kernel components (column 3, lines 46-52).

In reference to Claim 6, Kavsan further discloses transmitting communications from the kernel components, encrypting the communications, and transmitting the communications (column 3, lines 20-24).

In reference to Claims 7 and 8, Kavsan further discloses a management module in the kernel space (column 4, lines 4-11).

In reference to Claims 10 and 11, Kavsan further discloses a module defining operational states as an operational state and an administrative state and permitting or preventing communications based on the operational state (column 3, lines 27-29, where the administrative state includes software development).

In reference to Claims 12 and 13, Kavsan further discloses selecting an operational state (column 3, lines 24-29).

In reference to Claim 14, Kavsan discloses a method including disposing an authentication module in the kernel space for encrypting and decrypting communications (Figure 1, Cryptographic Service Module 10), disposing a transport module in the kernel space to transmit and receive communications (Figure 1, Kernel API 8), and selectively actuating the authentication module and transport module to convey communications to and from kernel-level components (column 3, lines 20-24). However, Kavsan does not explicitly disclose a filter driver to intercept the communications.

Nagar discloses that filter drivers may be used to intercept requests or communications targeting another kernel level driver (page 617, "What Is a Filter Driver?").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Kavsan by including a filter driver to intercept the communications, in order to provide added value beyond the core operating system environment (see Nagar, page 615, "Why Use Filter Drivers?").

In reference to Claim 15, Kavsan discloses a system including an authentication module (Figure 1, Cryptographic Service Module 10), a transport module (Figure 1, Kernel API 8), and a remote authentication module (see column 3, lines 46-52). Kavsan further discloses that encrypting communications from the remote site with the remote authentication module, receiving the

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communications, decrypting the communications, and permitting communications to be received by the kernel components (column 3, lines 46-52). Kavsan additionally discloses transmitting communications from the kernel components, encrypting the communications, transmitting the communications and decrypting the communications with the remote authentication module (column 3, lines 20-24 and 46-52). However, Kavsan does not explicitly disclose a filter driver to intercept the communications.

Nagar discloses that filter drivers may be used to intercept requests or communications targeting another kernel level driver (page 617, "What Is a Filter Driver?").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Kavsan by including a filter driver to intercept the communications, in order to provide added value beyond the core operating system environment (see Nagar, page 615, "Why Use Filter Drivers?").

In reference to Claims 16 and 17, Kavsan further discloses that communications pass between user space and kernel components while encrypted (column 3, lines 24-27).

Claims 20 and 21 are directed to computer readable code defining methods corresponding substantially to that of Claim 4, and are rejected by a similar rationale.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Marino, Jr., et al, US Patent 5029206, discloses an interface for cryptographic services including a security kernel.
- b. Cox et al, US Patent 5349643, discloses a secure system for encryption including a security kernel.
- c. Winiger, US Patent 5845068, discloses a security method with a kernel including a security process.
- d. Krause et al, US Patent 6070198, discloses an encryption system for encryption within the kernel space.
- e. Brundrett et al, US Patent 6249866, discloses an encrypting file system using a filter driver within the kernel space.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary A Davis whose telephone number is (703) 305-8902. The examiner can normally be reached on weekdays 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (703) 306-3036. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Andrew Caldwell
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